R E P O R T R E S U M E S

ED 003 477 24

A COMPARATIVE STUDY OF BEGINNING READING ACHIEVEMENT UNDER THREE CLASSROOM ORGANIZATIONAL PATTERNS--MODIFIED INDIVIDUALIZED, THREE-TO-FIVE GROUPS, AND WHOLE-CLASS LANGUAGE-EXPERIENCE.

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REPORT NUMBER CRP-2659 PUB DATE 65
CONTRACT OEC-4-10-263
EDRS PRICE MF-$0.18 HC-$3.16 79P.

DESCRIPTORS- COMPARATIVE ANALYSIS, *BEGINNING READING, *READING ACHIEVEMENT, ACHIEVEMENT GAINS, ABILITY GROUPINGS, *CLASSROOM ARRANGEMENT, ORGANIZATION, INDIVIDUAL INSTRUCTION, GROUP INSTRUCTION, *GROUP DYNAMICS, LANGUAGE ENRICHMENT, GRADE 1, *READING INTERESTS, WRITING SKILLS, MILWAUKEE, WISCONSIN

TO ASSESS DIFFERENCES IN READING ACHIEVEMENT, READING ATTITUDE, AND READING PROGRESS OF FIRST-GRADE CHILDREN OF HIGH AND LOW MENTAL ABILITIES DIFFERENT CLASSROOM ORGANIZATIONAL PATTERNS WERE USED. EACH ORGANIZATIONAL PATTERN PROVIDED A DIFFERENT LEARNING SITUATION OR "TREATMENT." THE STUDY SAMPLE CONSISTED OF 32 TEACHERS AND 810 CHILDREN WHO WERE HETEROGENEOUSLY ASSIGNED TO ONE OF THE THREE ORGANIZATIONAL PATTERNS--(1) MODIFIED INDIVIDUALIZED, (2) THREE-TO-FIVE GROUPS, OR (3) WHOLE-CLASS-LANGUAGE-EXPERIENCE. PRETEST MEASURES OF INTELLIGENCE, READINESS, AND PRESCHOOL EXPERIENCE WERE OBTAINED ON THE CHILDREN. AT THE END OF A 140-DAY PERIOD OF INSTRUCTION, MEASURES ON ACHIEVEMENT IN READING, ATTITUDE IN READING, AND PROGRESS IN WRITING WERE OBTAINED. POST-TEST RESULTS SHOWED NO SIGNIFICANT DIFFERENCES BETWEEN TREATMENTS ONE AND THREE, BOTH OF WHICH PRODUCED SIGNIFICANTLY HIGHER SCORES ON WORD MEANING, WORD STUDY SKILLS, AND ARITHMETIC THAN TREATMENT TWO. ANALYSIS OF THE RESULTS SHOWED THE TREATMENTS PRODUCED NO SIGNIFICANT DIFFERENCES WITH SUBJECTS OF MENTAL AGE ABOVE 77 MONTHS. STUDENTS BELOW A MENTAL AGE OF 77 MONTHS SHOWED DIFFERENCES FAVORING TREATMENTS ONE AND TWO EXCEPT IN ATTITUDE TOWARD READING WHICH FAVORED TREATMENT THREE. ONE SIGNIFICANT RESULT OF THE STUDY WAS THAT NO TEACHER USING THE LANGUAGE-EXPERIENCE APPROACH WITHOUT GROUPING WITHIN THE CLASS, WANTED TO RETURN TO THE TYPICAL THREE-TO-FIVE GROUP ORGANIZATIONAL PATTERN. (AL)

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Cooperative Research Project No. 2659

Sister M. Marita, Project Director

Marquette University
Milwaukee, Wisconsin
1965

The research reported herein was supported by the Cooperative Research Program of the Office of Education, U.S. Department of Health, Education, and Welfare.

ED003477

ACKNOWLEDGMENTS

The research reported herein was supported by the U.S. Office of Education under Public Law 531, contract number OE-4-10-263, Project Number 2742. The U.S. Office of Education also supported two conferences for all participating directors in the first-grade reading studies throughout the nation.

The investigator is especially indebted to the following first-grade teachers who participated in the study.

Betty Andree
Anita Balliett
Hope Barr
Jean Bjornson
Annette Byrnes
Ruth Dieringer
Norma Eckert
Mary Ann Fichtner
Helen Fox
Violet Guy
Pearl Hamilton
Marilyn Holloway
Kathryn Kief
Margaret Leahy
Mary Lien
Alice Maney
Janice Marcou
Stella Marthaler
Gladys Meier
Marie Moran
Arla Murry
Helen McCormick
Diana Olson
Dianne Paczkowski
Judith Persin
Edith Power
Charlotte Schauer
Christine Schmidt
Peggy Sheehan
Yvonne Wallschlaeger
Darlyne Weirs
Frances Turano

The cooperation and support of the principals, supervisors, consultants, and superintendents of the following school districts is sincerely appreciated: Greendale, Oak Creek, Whitnall, and West Allis. A very special thanks goes to the two general supervisors of the Milwaukee County Schools -- Helen Olson and Gertrude Urquhardt; and to Myrtle Lane, Olive Leary,

Monica McCabe, Myrtle Nyberg, Joseph Sparapani, and Donald Tecklaw for their administrative assistance as Curriculum Supervisors and Principals.

And finally, grateful acknowledgment is extended to Dr. Paul A. Witty, Professor of Education at North-Western University, for his invaluable advice and direction as consultant for the project.

TABLE OF CONTENTS

		Page
ACKNOWLEDGMENTS		i
TABLE OF CONTENTS		iii
CHAPTER		
I.	THE PROBLEM AND OBJECTIVES OF THE STUDY	1
	Problem	1
	Objectives	12
II.	PROCEDURES	14
	Introduction	14
	In-Service Meetings	15
	Observations	16
	Evaluative Instruments	16
	Description of Reading Instruction Under the Three Classroom Organizational Patterns	20
	Instructional Materials	27
III.	ANALYSIS OF THE DATA	30
	Description of the School Community	30
	Description of the Teachers	30
	Description of Sample	33
	Analysis of Readiness Test Results	34
	Analysis of Post-Experiment Data	40
IV.	RESULTS AND CONCLUSIONS	53
BIBLIOGRAPHY		57
APPENDIX A:	SELECTED NON-STANDARDIZED INSTRUMENTS USED IN THIS STUDY	58
APPENDIX B:	INSTRUCTIONS FOR WRITTEN LANGUAGE MEASURES	64
APPENDIX C:	MEANS AND STANDARD DEVIATIONS OF PRE-TESTS AND POST-TESTS FOR HIGH I.Q., LOW I.Q. AND TOTAL SAMPLE OF THREE ORGANIZATIONAL PATTERNS	71

LIST OF TABLES

Table		Page
I	Community Characteristics for Each Treatment Group	31
II	Information on Teachers	32
III	Characteristics of Subjects in the Study .	33
IV	Means and Standard Deviations and Significance of the Differences of Mental Age Scores as Measured by the Pintner-Cunningham Primary Test	34
V	Significance of the Differences of Readiness Sub-Test Scores Between Treatment Groups as Measured by the Murphy-Durrell Diagnostic Reading Readiness Test	35
VI	Significance of the Differences of Readiness Sub-Test Scores Between Treatment Groups as Measured by the Metropolitan Readiness Test	36
VII	Significance of the Differences of Thurstone Tests: Pattern Copying and Identical Form Scores Between Treatment Groups	37
VIII	Significance of the Differences of Selected Test Scores Between Treatment Groups with Mental Age Above 77	38
IX	Significance of the Differences of Selected Test Scores Between Treatment Groups with Mental Age Below 77	39
X	Significance of Differences of Stanford Achievement Scores Between Treatment Groups	40
XI	Significance of the Differences of Stanford Achievement Test Scores Between Treatment Groups with Mental Age Above 77	41
XII	Significance of the Differences of Stanford Achievement Test Scores Between Treatment Groups with Mental Age Below 77	42

XIII Significance of the Differences of Selected Test Scores Between Treatment Groups as Measured by Corresponding Tests 43

XIV Significance of the Differences of Reading Attitude Scores Between Treatment Groups 45

CHAPTER I

THE PROBLEM AND OBJECTIVES OF THE STUDY

Problem

The tremendous number of high ability students who are faced with reading problems, the persistent number of high school dropouts with pronounced reading difficulties, and the increasing number of remedial reading programs point to the need for more effective instruction in reading. In an attempt to provide a realistic approach for more effective reading instruction, the investigator challenges the classroom organizational patterns most commonly used for primary reading instruction in todays' schools, since these patterns control to a great extent what actually happens during the reading instruction period.

Traditionally the "whole-class" organizational pattern was used. At that time schools tended to be more subject-centered. The presentation of subject matter was typically stereotyped, rigid, and an end in itself, and often detrimental to the child, since the teacher was often more intent on teaching reading than she was on teaching children. During a typical learning situation, emphasis was placed on memorization, drill, and individual or group recitation. Teachers felt that every child should be doing the work of that particular

grade, hence a single standard was set for every child in the entire class.

Several decades ago, with a recognition of and an attempt to provide for individual differences in levels of reading ability and differences in rates of growth in reading, the "three-to-five group" organizational pattern within the whole class was introduced. In this structural pattern pupils are assigned to groups on the basis of mental age or reading achievement. Reading instruction is given to each small group separately while other pupils are engaged in independent activities related to reading. Currently this is the most commonly used organizational pattern in primary reading classes.

As a further attempt to provide for individual differences, the individualized approach to the teaching of reading has emerged. Under this organizational pattern, group work is kept at a minimum and each child progresses at his own rate in his self-selected book. He receives individual help during teacher-pupil conferences.

Chronologically then the sequence in classroom organizational patterns has been from the "traditional whole-class" structure to the "three-to-five group" structure within the whole class, and more recently to the "individualized" structure. The basic assumption underlying this sequence of patterns is that the

smaller the group being taught the more adequately individual differences can be provided for.

Several basic questions concerning the effect of classroom organizational patterns upon reading instruction follow.

1. Should not the very nature of the reading process itself dictate the organizational pattern to be used during reading instruction rather than only the attempt to provide for individual differences? Reading is not merely the mastery of mechanics, the ability to translate visual symbols into corresponding sounds, nor the ability to recognize familiar words. Smith[1] states that the process of reading requires that the reader bring meaning to the printed page in order to take meaning from it. The essence of the reading process is perceptual and conceptual rather than sensory, even though the reading act must begin by the reader reacting visually to the graphic symbol. Therefore it would seem that for adequate conceptual background, real and/or vicarious experiences should form an integral part of reading instruction. Is

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[1]Henry P. Smith, Psychology in Teaching Reading (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961), 22.

it possible to provide this experiential background when each group within the class is reading about a different topic? For example, stories read by the groups might include the following within a typical day:

Group 1 -- The Elephant at the Zoo
Group 2 -- Grandfather's Store
Group 3 -- Tom's Ride in a Jet
Group 4 -- The Gingerbread Man
Group 5 -- Three Wishes

Providing adequate experiential background for all of these topics in a single day is impossible. It is even more impossible to provide adequate experiential background for concept formation when each child within the class is reading about a different topic, as is the case in the individualized organizational pattern.

2. Research has not yet determined the best way of adapting class instruction to individual differences. Koontz[2] divided about 150 fourth graders, according to their scores on the Iowa Tests of Basic Skills, into four homogeneous achievement levels in arithmetic, language, and reading. At the end of one year of instruction, none of the groups were

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[2]William F. Koontz, "A Study of Achievement as a Function of Homogeneous Grouping," Journal of Experimental Education, 30 (December, 1961), 249-53.

significantly different in any curricular area from equated heterogeneous groups that had been given the usual fourth grade instruction. In a study at the sixth grade level, Balow and Ruddell[3] found no significant differences on subtests of the Metropolitan Achievement Tests after one year of instruction in (a) homogeneous, (b) cluster, and (c) heterogeneously grouped classes, except in language and arithmetic computation. The investigators suggested that instruction in all groups may have been geared to the level of middle ability, since in all groups this level showed the greatest gain.

Perhaps the best explanation for the failures of various grouping schemes to live up to expectation can be found in a study by Balow[4]. A fifth grade class of 94 pupils in one elementary school, divided by the faculty into four homogeneous groups, had a median grade equivalent of 6.7, 5.3, 4.0, and 3.3 on

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[3]Irving H. Balow and Arden K. Ruddell, "The Effects of Three Types of Grouping on Achievement," California Journal of Educational Research, 14 (May, 1963), 108-17.

[4]Irving H. Balow, "Does Homogeneous Grouping Give Homogeneous Groups?" Elementary School Journal, 63 (October, 1962), 28-32.

the total score of the Iowa Silent Reading Test. Balow's analysis, showed that on the eight subtest scores, the groups were in fact not homogeneous at all. Subtest variability was greatest in the "above grade group" and least in the most "below grade group." Conflicting results have been reported on the effectiveness of ability grouping at the upper elementary and the high school level. No controlled comparative studies pertaining to the effectiveness of grouping for reading instructions have been conducted at the first grade level. May we justifiably assume then that individual differences are being provided for in the most effective way through splitting the class into three-to-five groups or even working with each child individually during reading instruction? Furthermore, homogeneous grouping within reading classes is used as a means of providing for individual differences only in certain aspects of human abilities (commonly, mental age). However, when pupils are so grouped, these groups in reality become heterogeneous in relation to all other cognitive, psychomotor, and affective factors which influence reading achievement.

(For example, a child who is highly intelligent may lack social maturity and experiential background, while another may possess average intelligence, emotional immaturity, and a high degree of motivation.) And these factores not only exist in different degrees among children, but their growth is often marked by spurts and plateaus, thus adding further complication to the problem of grouping.

A truly homogeneous learning group must be organized on the basis of specific criteria that will not change while the group is together. Therefore it would seem almost impossible to group children in a genuinely homogeneous manner considering the wide range of normal differences and the interactions among all the abilities and traits which affect reading achievement. Also, in theory these groups are supposed to be flexible, but in reality the child who is placed in Group Three, for example, often remains in Group Three throughout the primary grades.

3. What effect does grouping have upon the child psychologically and socially? The negative

self-concept which children in the average groups often possess, certainly does not contribute to their feeling of self-worth; nor is it conducive to the development of aspiration, motive, or drive--all of which are essential for reading achievement.

4. Can a teacher plan three-to-five reading lessons as effectively as she can plan for one reading lesson? Because of time limitations for preparation, teachers frequently rely exclusively upon the suggestions in the reading manual.

5. Recognizing that quality of instruction is more important than amount of instruction time, we still ask: how much actual reading instruction time per day is each child receiving in either the individualized or in the three-to-five group organizational pattern? Can a teacher who must divide her instruction time among three-to-five groups, present as effective a lesson as if she had the entire reading instruction time for one presentation? Discussion of stories read by children tend to deepen their insights, their interpretative skills, their appreciation of literary qualities, and their

ability to express reaction to others. Because of the short reading period in the three-to-five group pattern, opportunities for such discussion are limited; and practically nonexistent in the individualized pattern.

6. Can a teacher plan and prepare sufficient meaningful and interesting independent reading activities for pupils with whom she is not working while she is instructing a small group? Are first graders able to work independently for long periods of time, without the direct supervision of the teacher? The supervision of independent activities of children is often extremely limited because the teacher is usually working with a small group during reading instruction.

After extensive classroom observations of the individualized and the three-to-five group organizational patterns, the investigator proposes a "whole-class, language-experience" organizational pattern as a feasible framework for effective reading instruction. This is not to be interpreted as a return to the "traditional whole-class" approach; nor is it intended to provide an escape for the teacher who feels overburdened with either the individualized or the three-to-five group

approach; neither is this approach intended to meet the needs of over-crowded classrooms. In brief the advantages of this organizational pattern seem to be:

1. Opportunity for concept development, which is of utmost importance if the child is to bring meaning to the printed page. Concept development is possible at greater depth in this approach because each child is reading about the same topic at any given time, and because the reading instruction period has not been fragmented through small group or individualized instruction.
2. Interest and motivation. Because of the real and vicarious experiences provided for the class, interest is usually high and tends to act as a motivational force. Since interest and motivation have a significant impact on learning, it would seem that this organizational pattern would provide an acceptable framework for reading achievement.
3. Integration of the Language Arts. Unifying factors in this "whole-class" organizational pattern are: a) the basic idea or concept being developed--dinosaurs, spaceships, fairies, circus clowns, etc.; b) the whole-class involvement and enjoyment at any

particular time; c) the natural progression from one language-art activity to another (with a single topic)--from experiencing to discussing, to dictating or writing, to reading, to word-analysis, to extended reading, to creative activities; and all under the direct supervision of the teacher at all times.

4. No Group Stigma. This organizational pattern helps to develop a sense of self-worth within a child, a sense of togetherness, of social give and take, of being a worthy member of a larger group. It gives the least competent reader a feeling of a belonging and participating.

5. Fewer Independent Reading Activities. With this approach only a limited number of independent activities are needed--just a sufficient number to give the child the opportunity to apply skills that he has learned, to experience the sense of accomplishment in performing a task independently, and to give the teacher the opportunity to evaluate the child's progress.

6. More Time for Preparation and Presentation of One Reading Lesson. The fact that the teacher has only one preparation doesn't

mean that she will spend less time in preparation, but her one preparation will be made at greater depth; it will be centered around a topic of general interest to the group; it will develop the concepts within the topic; it will provide for individual differences within the whole-class context; and it will integrate all the language arts.

7. Effective Use of Audio-Visual Materials. The fact that audio-visual materials such as the overhead, opaque and filmstrip projectors are available and that materials for the development of concepts can be used with these machines, tends to make this whole-class approach even more meaningful.

8. Class Size. The fact that today the first grade classes are generally smaller, and that furnishings in the first grade classrooms are versatile also add to the advantages of this approach.

Objectives

The objectives of this study were:

1. To determine whether there is a significant difference in reading achievement at the first-grade level among children in each of

the three organizational patterns: modified individualized; three-to-five group; and whole-class, language-experience.

2. To determine whether there is a significant difference in reading achievement at the first-grade level among children of high and low mental abilities in each of the three organizational patterns.
3. To determine whether there is a significant difference in attitude toward reading among first grade children in each of the three organizational patterns.
4. To determine whether there is a significant difference in attitude toward reading among first grade children of high and low mental abilities in each of the three organizational patterns.
5. To determine whether there is a significant difference in writing among first grade children in each of the three organizational patterns.
6. To determine whether there is a significant difference in writing among first grade children of high and low mental abilities in each of the three organizational patterns.

CHAPTER II

PROCEDURES

Introduction

This research project was one of the 27 research studies concerned with the teaching of beginning reading and sponsored by the United States Office of Education during the academic year of 1964-65. A co-ordinating center for the 27 studies was established at the University of Minnesota, where a comprehensive analysis of the data from all of the studies is being conducted.

This particular study was designed to determine the relative effectiveness of three classroom organizational patterns--modified individualized organizational pattern, three-to-five group organizational pattern, and a whole-class language-experience organizational pattern, on reading achievement at the first grade level.

Selection of the Sample

Thirty-two teachers and 810 heterogeneously grouped first-grade children (404 boys and 406 girls) from four public school districts in the Milwaukee Suburban area, constituted the sample for this study. The participating school districts were Greendale, Oak Creek, West Allis, and Whitnall.

Ten first grade teachers were selected from these school districts for each of the three classroom organizational patterns. Selection of these teachers was made on the basis of the prevailing type of reading program offered in the respective school system and/or upon the willingness of the school personnel to adapt to the needs of the proposed study. In the school district where the modified individualized organizational pattern was used, the teachers were selected by the respective supervisors of that district. Since there were only 10 first-grade teachers in the school district using the three-to-five group organizational pattern, and only 12 first-grade teachers in the two districts using the whole-class, language-experience organizational pattern, all first-grade teachers in these three districts participated in the study. The children assigned to these 32 teachers were from 20 elementary schools in the four above mentioned school districts.

In-Service Meetings

Prior to the opening of school in September 1964, the project director met with the 32 teachers, the principals, the curriculum and/or reading supervisors of the respective schools, and the research staff. The purpose of this session was to acquaint everyone concerned with the purposes and methods of the research project.

Observations

During the 140 day experimental period observations were scheduled for each classroom. These observations were made by the principal and reading or curriculum consultants in the particular district. These persons were expected to continue the supervisory activities which they normally perform within their respective districts and to see that the experimental conditions of the Study were carried out within each classroom. The project director spent at least three mornings weekly visiting classrooms. Each classroom was visited by the director monthly and sometimes more frequently. The purpose of her observations was to gain greater insights into the factors that might affect success in the teaching of reading and to see that the limits of the research were being carried out.

Evaluative Instruments

The evaluative instruments used in this study were those agreed upon by the 27 directors of the independent Cooperative Research Studies in First Grade Reading. The use of common instruments was intended for the purpose of collecting and comparing data from the various research projects.

The following evaluative instruments were administered to all children in the sample prior to the 140 day instruction period.

1. Murphy-Durrell Diagnostic Reading Readiness Test (Revised).[1]

   Phonemes (Part I - Beginning Consonants)
   Letter Names (Capitals)
   Letter Names (Lower Case)
   Phonemes (Part II - Beginning and Ending Speech Blends)

2. Metropolitan Readiness Test[2]

   Word Meaning
   Listening
   Matching
   Alphabet
   Numbers
   Copying

3. Pintner-Cunningham Primary Test, Form A[3]

   Common Observation
   Aesthetic Differences
   Associated Objects
   Discrimination of Size
   Picture Parts
   Picture Completion
   Dot Drawing

4. Thurstone Perception Tests

   Pattern Copying[4]
   Identical Forms[5]

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[1]Helen A. Murphy and Donald D. Durrell, Diagnostic Reading Readiness Test, Rev. Ed., (New York: Harcourt, Brace and World, Inc., 1964).

[2]Gertrude H. Hildreth, Nellie L. Griffiths, and Mary E. McGauvran, Metropolitan Readiness Tests, Form A, (New York: Harcourt, Brace and World, Inc., 1964).

[3]Rudolf Pintner, Bess V. Cunningham and Walter N. Durost, Pintner Cunningham Primary Test, (New York: Harcourt, Brace and World, Inc., 1938, 1964).

[4]Thelma G. Thurstone, Pattern Copying (Special permission granted by Thelma G. Thurstone for experimental use only in connection with the First Grade Reading Study sponsored by Cooperative Research Branch of U.S. Office of Education).

[5]Thelma G. Thurstone and T.E. Jeffrey, Identical Forms, 1956.

Evaluative instruments administered to all subjects at the end of the 140 days of instruction included the following.

1. Stanford Achievement Test, Primary I Battery, Form X[6]

   Word Reading
   Paragraph Meaning
   Vocabulary
   Spelling
   Word Study Skills
   Arithmetic

2. San Diego Pupil Attitude Inventory[7]

The following tests were administered to a randomly selected subsample of 50 subjects from each treatment group.

1. Gilmore Oral Reading Test[8]
2. Fry Phonetically Regular Words Oral Reading Test[9]
3. Gates Word Pronunciation Test[10]

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[6]Truman L. Kelley, et al, Stanford Achievement Test, Primary I Battery, Form X (New York: Harcourt, Brace and World, Inc., 1963, 1964).

[7]Printed for use in U.S.O.E. First Grade Studies. A copy appears in Appendix A.

[8]John V. Gilmore, Gilmore Oral Reading Test, (New York: Harcourt, Brace and World, Inc., 1951).

[9]Non-standardized test printed for use in the U.S.O.E. First Grade Studies. A copy appears in Appendix A.

[10]Non-standardized test printed for use in the U.S.O.E. First Grade Studies. A copy appears in Appendix A.

4. Karlsen Phonemic Word Test[11]

Pre-tests were administered prior to, or during the first week of the 140 day instruction period, with the exception of the Pintner-Cunningham Primary Test, Form A, which was administered during the following week. Post-tests were administered in May during the two weeks following the 140 day instruction period. The dates for pre and post testing differed slightly because of differences in school calendars.

All tests were administered by staff under the direction of the investigator. None of the tests were administered by classroom teachers. However, the teachers did serve as monitors and assisted the test administrators. Tests were scored and re-checked by a group of trained workers under the supervision of the research director.

Two writing samples using restricted stimuli, were obtained from all subjects in the three treatment groups. Complete directions for obtaining these two samples are found in Appendix B. Three scoring measures were used in evaluating the writing samples: a mechanics ratio scale based on capitalization, punctuation, and indentation; a spelling score based on the total number of words spelled correctly; and a count of the total number of

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[11]Non-standardized test printed for use in the U.S.O.E. First Grade Studies. A copy appears in Appendix A.

running words. No attempt was made to evaluate any other aspect of the writing samples such as interest or originality since no scales for such evaluation was available.

Description of Reading Instruction Under the Three Classroom Organizational Patterns

The experimental instructional period lasted for a total of 140 days. In each of the classrooms of the three treatment groups, approximately 150 minutes of the daily schedule were devoted to reading and related areas such as oral expression, written expression, story telling and handwriting.

Modified-Individualized Organizational Pattern. Teachers in treatment one, or the modified-individualized organizational pattern, used a basal text for reading instruction with three-to-five ability groups during the morning reading session. The typical sequential development of a reading lesson found in the manual was followed by these teachers. While the teacher was working with one group of children, other children within the class were engaged in independent reading activities. After the individual child was able to recognize a minimal number of sight words through the use of experience charts and pre-primers, he was given the opportunity under the guidance of the teacher, to select his own books from among pre-primers and very

simple trade books and begin independent reading.

During the afternoon reading session, individual conferences, three to five minutes each, were held with children who were ready to read orally to the teacher or to discuss their reading with the teacher. These one-to-one conferences were considered the pivotal point of this approach. Questions of the following nature were explored during each conference: How does the child feel about reading in general and his selected book in particular? Which skills need developing or reteaching? How well does the child read orally? The teacher kept a record of the books read by each child and also a record of his difficulties. She helped him then and there with his specific reading problems and made provision for further practice. The teacher arranged individual conferences with the children as often as she could. The average number of conferences per child was one a week.

During this individualized reading instruction period, children who were not having a conference with the teacher were generally reading from their self-selected books. Worksheets which were prepared either by the teacher or taken from a variety of workbooks were filed and available for use by children who needed independent work in specific reading skills. These worksheets were generally accompanied by a self-checking

device in order that immediate reinforcement might be possible, that the child might learn to evaluate his own work, and that the teacher's time might be more efficiently used.

In a typical individualized reading program, group sessions are held at which time instruction in the reading skills is given. These temporary groups, involving a few children, many children, or the whole class, are formed when the need arises. When the specific need has been fulfilled, as perceived by the teacher, the group will disband. During a pupil-teacher planning period, children will be told that they might come to any or all of these groups, stay as long as they care to, and leave when they are ready, provided that they find a useful activity elsewhere in the room. However, this aspect of the individualized approach to the teaching of reading was used to a very limited degree, since the first daily reading period was devoted to basal reading instruction within the three-to-five group structure.

Three-to-five Group Organizational Pattern. Teachers in treatment two, or the three-to-five group organizational pattern spent the first two or three weeks of school observing first grade performance on readiness materials, which in turn provided a basis for setting up ability groups for reading. Those

children showing the highest degree of readiness began the pre-primer program as soon as they were adjusted to school. Subsequent groups began reading from books at later dates commensurate with their readiness as judged by the teacher. In the meantime an enriched program of readiness activities was offered to these children.

During the daily formal reading instruction period the teacher and the children were normally engaged in the following activities. Formal reading instruction was given to each group within the clase. (Classroom organization in this system is such that children in a specific reading group are somewhat isolated from the rest of the class. The teacher and the children keep their voices at low volume so as not to disturb the other children in the classroom.) This instruction generally consisted of preparing the group for advanced reading (reading beyond prior reading lessons), through the development of new concepts and vocabulary pertinent to the story so that pupils may read the selection with understanding and without undue problems caused by unfamiliar concepts and unanticipated vocabulary. This procedure was followed by guided readings of the story, which in turn was usually followed by discussion of the story for the purpose of developing interpretative reading skills. Other activities during the instruction period included

introduction to and practice exercises in word recognition and word attack skills. These activities generally followed the developmental program suggested in the accompanying manual of the basal series being used.

While the teacher worked with a particular reading group, other members of the class were engaged in independent reading or activities related to reading in general. The independent activity was generally of such a nature that the teacher would not be disturbed during her developmental reading instruction with the various groups (the very nature of such instruction requires almost complete attention on the part of the teacher over a longer period of time in comparison to that of the teacher who is working with pupils in the individualized program where she can arrange for interruptions between the short conferences with pupils.)

Children were given the opportunity to select independent reading material, but the reading of this material was not checked by the teacher. Since each reading group was using a different basal series (which meant a different vocabulary), teachers often hesitated to move a child from one reading group to another.

Whole-Class Language-Experience Organizational Pattern. Teachers in treatment three also spent the

first two to three weeks of school observing the child's reading readiness performance and providing opportunities for continued development of readiness skills. Experience charts were used as a whole-group activity at this time, and continued to be used throughout the first grade.

The major part of the formal reading instruction period was devoted to the development of concepts either through real and/or vicarious experiences. Field-trips, demonstrations, pre-planned classroom experiences related to childrens' interests, films, filmstrips, pictorial representations, talks by people in the community, and other appropriate media were used for these whole-class experiences. Based on interests of children and on topics in which children can generate new interests, these experiences were then discussed by the whole class in order to further develop oral and written language skills, concepts, and vocabulary which was encountered in related reading. This subsequent related reading was selected from stories developed by the class and transformed to written language by the teacher (experience charts), and from a basal reader, provided related stories were contained therein. New words were not formally introduced. The child was led to discover them for himself either through content or word-analysis clues. All pupils were then engaged in

reading the entire story silently; in answering specific questions, making inferences, narrating events in logical sequence or recognizing affective reactions of story characters, and in reading orally parts of the story which they particularly enjoyed.

Following the reading and the discussion of the story, further instruction was given in the sequential development of reading skills (word attack and word recognition skills in particular). This instruction was followed either by independent reading of the child's self-selected book, working independently on worksheets related to the skills just developed, or voluntarily pursuing further instructional help from his peers before he attempted to work independently. All independent work was supervised by the teacher in order to enable her to gain meaningful information about the reading achievement of the individuals within her class, to observe and improve study habits of her pupils, and to help her pupils evaluate their own progress.

Since children at this age level (regardless of their mental age) display fairly homogeneous interest patterns, since whole-class experiences were built on these interests, and since written and oral language activities were engaged in by the whole class, the reading of stories was also accomplished by the class

as a whole, rather than splitting the class into groups for only one of the language arts--reading. However, this does not mean that each child was expected to perform at the same level of proficiency in reading any more than each child is expected to develop the same degree of proficiency in oral or written language activities. Since there is no single standard set for every child within the class, each child is free to absorb as much from each reading situation as he can, rather than being pressured into mastery of the material at every step.

Instructional Materials

The following instructional materials were used by the teachers in each of three treatment groups. The teachers in the modified-individualized organizational pattern used the Ginn Basic Reading Series[12] for the morning reading instruction period. This series was used because the district had previously selected it as a basal text. Workbooks to accompany the Ginn Basal Series were also used by the teachers in this treatment group. Each classroom was supplied with several hundred trade books and several copies of pre-primers, primers, and more advanced books of most basal series.

---

[12] David H. Russell and others, Ginn Basic Reading Series (Chicago: Ginn and Company, 1964).

Teachers in the three-to-five group organizational pattern used a different basal series for each reading group. The basal series used by each teacher depended upon a) the availability of the series, b) the appropriateness of the series for the reading level, and/or c) teacher preference. Workbooks accompanying the basal series were also used in the organizational pattern. Since both daily reading periods were devoted to reading instruction from a basal series, each reading group used several other series for enrichment after they had completed reading their own selected basal series at a particular level. For example, after completing the primer, each group might have read three other primers before proceeding to the Book One level. A minimum of 100 trade books and other basal materials from several series were available in each classroom for independent reading.

Teachers in the whole-class language-experience approach used basal readers to a limited extent. No particular series was used systematically by any teacher. If a teacher used pre-primers from one series, she was asked to use primers from another series,etc. Only selected stories were used from these books. Experience charts were used throughout the first grade. Audio-Visual Materials and interesting stories duplicated for the whole class were

used to a great extent by these teachers. A minimum of 100 trade books and individual copies of basal material were available in each classroom for independent reading. Teachers in this approach used workbooks only to a limited extent. Teachers were encouraged not to use workbooks unless they felt that these materials were essential for achieving basic reading skills.

CHAPTER III

ANALYSIS OF THE DATA

In order to evaluate the data of this study it is essential to be aware of pertinent information concerning the community, the school districts, the teachers, and other factors which might affect in some way, the results of the study.

Description of the School Community

All Classrooms selected for this study were located in the Milwaukee Suburban All-White Area. The pupil population came from 20 schools in four school districts. Information pertaining to the school community is indicated in Table I.

The cost per pupil in average daily attendance in the modified-individualized organizational pattern was $400; in the three-to-five group organizational pattern, the mean cost was $360; mean cost per pupil in the whole-group language-experience organizational pattern was $460. There was little difference in the length of school day and the length of school year within the Treatment Groups.

Description of the Teachers

All of the 32 teachers involved in the experiment were female. Information pertaining to these teachers is found in Table II.

TABLE I

COMMUNITY CHARACTERISTICS FOR EACH TREATMENT GROUP

CHARACTERISTIC	TREATMENT		
	Modified Ind.	Three-To-Five Groups	Whole-Class Lang. Ex.
Median Number of Years Education of Adults	11	10.7	12.5
Median Income of Family in Community or Census Tract	$6,966	$6,984	$8,744
Population of Community	65,137	9,372	5,549

TABLE II

INFORMATION ON TEACHERS

CHARACTERISTIC	TREATMENT		
	Modified Ind. Teachers (N=10)	Three-To-Five Groups Teachers (N=10)	Whole-Class Lang. Ex. Teachers (N=12)
Age			
under 30	5	2	2
30-50	3	4	7
over 50	2	4	3
Highest Degree			
0-No Degree	1	1	2
1-B.A.	9	8	8
2-M.A.	0	0	2
3-above M.A.	0	1	0
Type of Certificate			
2-Prov.	1	1	1
3-Standard	9	9	8
4-Higher than 3	0	0	3
Total Yrs. of Exper.	5	3	6
under 10	3	3	2
10-20	2	4	4
over 20			
Total First Gr. Exper.			
Under 5	3	3	4
5-15	4	4	6
15-30	3	3	2
Marital Status			
0-Single	2	3	3
1-Married	8	7	9
2-Widow or Divorce	0	0	0
No. of Children Teacher has			
none	8	6	6
1-3	2	3	5
4-8	0	1	1
Teacher absences (days)			
0-5	4	6	6
6-12	5	4	6
above 12	1	0	0

Description of Sample

There were 810 subjects in this study--406 girls and 404 boys. Characteristics of subjects in the study are found in Table III.

TABLE III

CHARACTERISTICS OF SUBJECTS IN THE STUDY

FACTOR	TREATMENT		
	Modified Ind.	Three-To-Five Groups	Whole-Class Lang. Ex.
No. of Classrooms	10	10	12
No. of Subjects	240	274	296
Sex:			
Male	128	121	139
Female	112	153	157
Chron. Age (months)			
Mean	76.45	76.42	76.83
S.D.	4.57	4.11	4.26
Mental Age (months)			
Mean	77.06	73.63	78.86
S.D.	9.79	10.47	10.31
Pre-School Attendance (2-21 to 100 half days) (3-101 to 200 half days)			
Mean	3.22	2.62	2.94
S.D.	.68	.95	.44
Class Size	26.16	30.86	26.05
Mean	4.26	8.30	3.08
S.D.			
Pupil Attendance (days absent)			
Mean	8.25	10.17	8.98
S.D.	7.19	7.30	6.60

Tests of intelligence, readiness, achievement, attitude and writing ability were administered to the subjects. Simple t-tests were used to compare group means.

Results of the Pintner-Cunningham Primary Test for each of the three groups studied are found in Table IV.

TABLE IV

MEANS AND STANDARD DEVIATIONS AND SIGNIFICANCE OF THE DIFFERENCES OF MENTAL AGE SCORES AS MEASURED BY THE PINTNER-CUNNINGHAM PRIMARY TEST

Treatment	N	Mean	S.D.	t
Modified-Ind.	240	77.07	9.80	3.83
Three-To-Five Gr.	274	73.64	10.48	
Modified-Ind.	240	77.07	9.80	-2.04
Whole-Class	296	78.86	10.32	
Three-To-Five Gr.	274	73.64	10.48	-5.95
Whole-Class	296	78.86	10.32	

Table IV reveals that there is a significant difference in mental age at the .05 level of confidence between Treatment Groups.

Analysis of Readiness Test Results

The Murphy-Durrell Diagnostic Reading Readiness Test, Revised Edition, was administered to all children before the instructional period began. Tests of

significant differences between sub-test scores from each of the three treatment groups were made. Results of these tests of significance together with means and standard deviations of each group of scores are shown in Table V.

TABLE V

SIGNIFICANCE OF THE DIFFERENCES OF READINESS SUB-TEST SCORES BETWEEN TREATMENT GROUPS AS MEASURED BY THE MURPHY-DURRELL DIAGNOSTIC READING READINESS TEST

Sub-Test	TREATMENTS		
	T_1-T_2	T_1-T_3	T_2-T_3
Phonemes	3.64	4.52	-3.28
Letter Names (Capital)	1.70	1.17	--
Letter Names (Lower Case)	--	--	--
Letter Names (Caps. and L.C.)	1.20	--	-1.16
Learning Rate	-2.53	2.72	4.99

Table V indicates that there is no significant difference in scores on Letter Names between treatment groups but there is a significant difference at the .01 level between means of treatment groups in Phonemes in favor of Treatment One and Three; and on Learning Rate in favor of Treatment Two. Means and Standard Deviations for this test and for all other pre and post tests are found in Appendix B.

The Metropolitan Readiness Test was also administered to all subjects in the three treatment groups. Table VI indicates the significant differences between treatment groups on all sub-tests, and the total score of this instrument.

TABLE VI

SIGNIFICANCE OF THE DIFFERENCES OF READINESS SUB-TEST SCORES BETWEEN TREATMENT GROUPS AS MEASURED BY THE METROPOLITAN READINESS TEST

FACTOR	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Word Meaning	5.90	--	-6.36
Listening	4.69	--	-4.05
Matching	9.09	6.05	-3.03
Alphabet	1.93	--	-1.56
Numbers	7.58	4.24	-3.61
Copying	2.46	--	-2.78
Total	2.43	3.03	-1.19

Results of tests of significance seem to indicate that the Treatment Two Group are significantly lower than Treatment One and Treatment Three Groups.

The Thurstone Pattern Copying and Identical Forms Tests were also given to all subjects in each treatment group. Table VII contains the results of these tests.

TABLE VII

SIGNIFICANCE OF THE DIFFERENCES OF THURSTONE TESTS: PATTERN COPYING AND IDENTICAL FORM SCORES BETWEEN TREATMENT GROUPS

THURSTONE TEST	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Pattern Copying	2.02	-2.35	-4.56
Identical Forms	4.90	8.35	2.14

Because of the apparent differences between treatment groups, subjects were divided into High and Low Mental Age Groups and tests of significance were again computed between scores on pre-tests for the three treatment groups. The results of these significance tests are found in Tables VIII and IX.

TABLE VIII

SIGNIFICANCE OF THE DIFFERENCES OF SELECTED TEST SCORES BETWEEN TREATMENT GROUPS WITH MENTAL AGE ABOVE 77

INSTRUMENT	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Murphy-Durrell Readiness			
Phonemes	1.45	1.51	--
Letter Names (Caps.)	--	--	--
Letter Names (L.C.)	-1.14	--	--
Letter Names (Total)	--	--	1.15
Learning Rate	--	1.17	4.58
Thurstone Test			
Pattern Copying	--	-1.31	-2.50
Identical Forms	--	5.90	4.34
Metropolitan Readiness			
Word Meaning	--	--	-1.10
Listening	3.95	1.67	-2.55
Matching	3.34	4.08	--
Numbers	2.86	2.67	--
Copying	--	--	--
Alphabet	--	--	--
Total	3.79	2.53	-1.40

TABLE IX

SIGNIFICANCE OF THE DIFFERENCES OF SELECTED TEST SCORES BETWEEN TREATMENT GROUPS WITH MENTAL AGE BELOW 77

INSTRUMENT	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Murphy-Durrell Readiness			
Phonemes	2.21	5.76	3.44
Letter Names (Cap.)	--	--	--
Letter Names (L.C.)	-1.06	-5.68	-4.81
Letter Names (Total)	--	10.28	9.76
Learning Rate	-1.97	4.00	5.49
Thurstone Test			
Pattern Copying	--	20.44	-21.71
Identical Forms	4.03	-17.19	-19.65
Metropolitan Readiness			
Word Meaning	4.18	-7.60	-8.56
Listening	1.70	--	--
Matching	6.96	--	--
Numbers	5.98	--	--
Copying	1.15	10.38	11.21
Alphabet	--	-8.40	-8.48
Total	--	-18.43	-18.29

Analysis of Post-Experiment Data

The Stanford Achievement Test, Primary I Battery, Form X, was used to measure reading achievement at the end of the experimental period. The mean scores and standard deviations for all sub-tests are reported in Appendix B.

Tests of significant differences in achievement sub-test scores between the three treatment groups are reported in Table X.

TABLE X

SIGNIFICANCE OF DIFFERENCES OF STANFORD ACHIEVEMENT SCORES BETWEEN TREATMENT GROUPS

STANFORD ACHIEVEMENT TEST	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Word Meaning	2.15	--	-3.05
Paragraph Meaning	1.08	--	-1.48
Vocabulary	1.09	--	-1.99
Spelling	1.11	--	1.13
Word Study Skills	2.67	--	-3.56
Arithmetic	5.22	--	-5.74

Table X indicates that subjects performed as well as subjects in either of the two treatment groups. In order to see if performance was significantly higher for subjects of higher or lower ability, tests of signifi-

cance were also run between these two categories of subjects. The results are found in Table XI and Table XII.

TABLE XI

SIGNIFICANCE OF THE DIFFERENCES OF STANFORD ACHIEVEMENT TEST SCORES BETWEEN TREATMENT GROUPS WITH MENTAL AGE ABOVE 77

	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Word Meaning	--	--	--
Paragraph	--	1.03	--
Vocabulary	-2.05	-1.32	--
Spelling	--	1.40	1.17
Word Study Skills	--	--	--
Arithmetic	2.47	1.04	1.59

TABLE XII

SIGNIFICANCE OF THE DIFFERENCES OF STANFORD ACHIEVEMENT TEST SCORES BETWEEN TREATMENT GROUPS WITH MENTAL AGE BELOW 77

	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Word Meaning	1.70	3.82	2.35
Paragraph	--	7.75	8.16
Vocabulary	2.90	-7.23	-9.12
Spelling	--	--	--
Word Study Skills	2.88	21.31	18.68
Arithmetic	5.03	21.16	17.38

Three word lists, Fry Phonetically Regular Words Oral Reading Test, Gates Word Pronunciation Test and Karlsen Phonemic Word Test, and the Gilmore Oral Reading Test Form A were administered to a randomly selected sample of subjects from each treatment group. A test for significant differences between achievement among the three treatment groups on these measures is found in Table XIII.

TABLE XIII

SIGNIFICANCE OF THE DIFFERENCES OF SELECTED TEST SCORES BETWEEN TREATMENT GROUPS AS MEASURED BY CORRESPONDING TESTS

	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Gilmore			
Acc.	--	7.14	6.58
Rate	--	1.68	1.34
Fry Test	1.43	-24.53	22.01
Gate Test	-1.00	--	--
Karlsen Test	--	-2.54	-2.09

The Gilmore Accuracy scores favored Treatment Three. There were no significant differences between means of the three treatment groups on the Gates Word Pronunciation Test.

Two writing samples from each subject in each treatment group were collected from each subject in the project. According to the directions from the Coordinating Center, three scores were obtained from each writing sample; a) mechanics ratio score which included capitalization, punctuation, and identation, b) total number of words spelled correctly, and c) total number of running words. Results of these samples are reported in Table XIV.

TABLE XIV

SIGNIFICANCE OF DIFFERENCES OF SCORES ON WRITING SAMPLE BETWEEN TREATMENT GROUPS

	TREATMENT		
	T_1-T_2	T_1-T_3	T_2-T_3
Mechanics Ratio	-1.85	--	-2.06
No. of words Spelled Correctly	-4.56	-1.86	2.35
Total No. Running Words	-5.36	-3.49	1.66

The above data which represents the results of the restricted stimulus writing sample was obtained by asking children to "write a story" without the teacher providing specific ideas to motivate them. Specific directions for obtaining this sample are found in Appendix B.

The San Diego Attitude Inventory was also administered to all subjects. A copy of this inventory is included in Appendix A. A test of significance was obtained between treatment groups using the total number of subjects. Significant tests were also obtained separately on subjects with a mental age of 77 or higher and on those subjects within each treatment group with a mental age below 77 months. Results of these significance tests are found in Table XV.

TABLE XV

SIGNIFICANCE OF THE DIFFERENCES OF SCORES ON THE SAN DIEGO ATTITUDE INVENTORY BETWEEN TREATMENT GROUPS

	TREATMENT		
	T_1-T_2	T_1-T	T_2-T_3
Attitude Inventory			
Total Group	--	--	--
High Ability Group	--	1.15	1.43
Low Ability roup	--	-4.72	-4.87

CHAPTER IV

RESULTS AND CONCLUSIONS

The primary purpose of this research was to reading achievement under three classroom organizational patterns:

1. a modified-individualized pattern
2. a three-t--five group pattern
3. a whole-class language-experience pattern

Thirty-two classrooms of children in four Milwaukee Suburban School Districts participated in this study.

Measures of intelligence and readiness were obtained at thebeginning of the 140 day instruction period, and measures of achievement in reading and attitude toward reading were obtained at the end of the 140 day period.

Results of the pretests are as follows.

1. There were significant differences between treatment groups in intelligence.
2. There were significant differences in readiness scores on all subtests except three.
3. There were significant differences in pre-school experience between treatment groups.

It is apparent from the foregoing that the groups were not well matched for this experiment. However, because of the very nature of the study it was almost

to get teachers for the "whole-class language-experience approach, that is from several school districts. The only alternative was ato take these teachers from one or two districts. It might be noted here that perhaps one of the most significant results of the study is that no teacher using the language-experience approach without grouping within the class, wanted to return to the typical three-to-five group organizational pattern.

Results of post measures include the following:

1. Simple t-tests showed no significant differences on any subtests between Treatment One and Treatment Three. Treatment One and Treatment Three were significantly higher than Treatment Two on Word Meaning, Word Study Skills and Arithmetic.
2. When Treatment Groups were separated into those having above a mental age of 77 months and those having below a mental age of 77 months, there were more marked differences between treatment groups with lower mental age groups. In most instances the differences were in favor of Treat-One and Treatment Two. There were no significant differences between Treatment Groups with subjects of mental age above 77 months.

3. Differences in attitude toward reading were not significant between treatment groups, either when the subjects above 77months (mental age) or when all subjects were used. However when differences between the means of the lower ability group were tested, there was a significant difference in favor of Treatment Three.
4. Perhaps comments of teachers are not the most statistically sophistocated results of research, but they certainly can have implications for teaching. The following are a few of such comments made by teachers using the whole-class language-experience arganizational pattern:
   a) A more positive approach for the low group.
   b) A sense of security for everyone in the class.
   c) Less need for "busy work"/
   d) Fewer discipline problems.
   e) Children are thoroughly motivated.
   f) Less able children work harder and incidently get more.
   g) The child can advance at his own speed.
   h) Grouping is always a problem and it is difficult to do.
   i) A more enthusiastic presentation.

Implications for Further Study

1. Since the basic goal in teaching reading to children is to make readers of them, it would seem that we should be concerned about developing a positive attitude toward reading, and perhaps less concerned that they know all the phonetic rules along with the exceptions.
2. Many sincere teachers and researchers too, place so much emphasis upon materials and so little emphasis upon the nature of the reading process itself. Perhaps our colleges are also placing the emphasis upon these tangibles rather than upon the deeper aspects of the process.
3. In observing teachers in first-grade reading classes it seems that a very important factor which affects success in reading is the relationship between the teacher and the child. Perhaps this is as important in the "learning to read" process than trying to isolate all the other factors that affect reading.
4. Since the whole-class language-experience organizational pattern seems to have potential as an interest-approach to the teaching of reading, the investigator is currently engaged in an in-depth study of this approach in 19 classrooms. The project is being sponsored by the Kettering Foundation. Results of the study will be published during the current year.

PRECEDING PAGE(S) MISSING

APPENDIX A

SELECTED NON-STANDARDIZED INSTRUMENTS USED IN THIS STUDY

FRY PHONETICALLY REGULAR WORDS ORAL READING TEST

Child's Name_____ Date_____

School_____ Room_____ Code Number_____

Examiner_____ Number of Words Read Correctly_____

1.	nap	16.	walk
2.	pen	17.	haul
3.	hid	18.	jaw
4.	job	19.	soil
5.	rug	20.	joy
6.	shade	21.	frown
7.	drive	22.	trout
8.	joke	23.	term
9.	mule	24.	curl
10.	plain	25.	birch
11.	hay	26.	rare
12.	keen	27.	star
13.	least	28.	porch
14.	loan	29.	smooth
15.	show	30.	shook

Directions: Have pupil read words from one copy while examiner makes another copy. Do not give pupil a second chance but accept immediate self-correction. Let every student try the whole first column. If he gets two words correct from word number six on, let him try the whole second column.

KARLSEN PHONEMIC WORD TEST

EXAMINER'S COPY

DIRECTIONS:
1. Hand the PUPIL'S COPY to the pupil.
2. Say: "Read these words out loud."
3. Note the pupil's errors on this sheet.
4. Do not give the pupil a second chance, but accept immediate self-correction.
5. Continue until the child misses 5 consecutive words.
6. The score is the number of words pronounced correctly.

---

1. fit	14. gold	27. snowball
2. tap	15. freeze	28. thirteen
3. red	16. chair	29. scare
4. get	17. mouth	30 sunshine
5. would	18. carry	31. gymnasium
6. mother	19. hope	32. join
7. down	20. beat	33. usual
8. age	21. loaf	34. zone
9. think	22. cowboy	35. teaspoon
10 long	23. furniture	36. monument
11. kind	24. page	37. senior
12. yard	25. push	38. flute
13. foot	26. huge	39. behave
		40. faucet

Child's name: _____ Test date_____

Examiner: _____ Birth date_____

Age_____

GATES WORD PRONUNCIATION TEST

EXAMINER'S COPY

DIRECTIONS: Have the child read the words out loud. Tell him you would like him to read some words for you. If he fails the first time, ask him to try the word again. Continue until ten consecutive words have been missed. As the words become difficult, special care should be taken to encourage the child. The score is one point for each word correctly pronounced on the first trial, one-half point for each word correctly pronounced on the second trial. (Note: $9\frac{1}{2}$ correct would be scored as 10.)

1. so	14. about	27. conductor
2. we	15. paper	28. brightness
3. as	16. blind	29. intelligent
4. go	17. window	30. construct
5. the	18. family	31. position
6. not	19. perhaps	32. profitable
7. how	20. plaster	33. irregular
8. may	21. passenger	34. schoolmaster
9. king	22. wander	35. lamentation
10. here	23. interest	36. community
11. grow	24. chocolate	37. satisfactory
12. late	25. dispute	38. illustrious
13. every	26. portion	39. superstition
		40. affectionate

Child's name:_____ Test date ___ ___ ___

Examiner:_____ Birth date ___ ___ ___

Age: _____

AN INVENTORY OF READING ATTITUDE

(Standardization Edition)

Name_____ Grade_____ Boy Girl
Last First Middle

School_____Teacher_____

Date of Test_____
Mo. Day Yr.

TO BOYS AND GIRLS:

This sheet has some questions about reading which can be answered YES or NO. Your answers will show what you usually think about reading. After each question is read to you, circle your answer.

INSTRUCTIONS TO PUPILS

Draw a circle around the word YES or NO, whichever shows your answer.

Sample A

Yes No Do you like to read?

If you like to read, you should have drawn a circle around the word YES in Sample A; if you do not like to read, you should have drawn a circle around the word NO.

Sample B

Yes No Do you read as well as you would like to?

If you read as well as you would like to, you should have drawn a circle around the word YES in Sample B; if not, you should have drawn a circle around the word NO.

Yes No 1. Do you like to read before you go to bed?

Yes No 2. Do you think that you are a poor reader?

Yes No 3. Are you interested in what other people read?

Yes No 4. Do you like to read when your mother and dad are reading?

Yes No 5. Is reading your favorite subject at school?

Yes No 6. If you could do anything you wanted to do, would reading be one of the things you would choose to do?

Yes No 7. Do you think that you are a good reader for your age?

Yes No 8. Do you like to read catalogs?

Yes No 9. Do you think that most things are more fun than reading?

Yes No 10. Do you like to read aloud for other children at school?

Yes No 11. Do you think reading recipes is fun?

Yes No 12. Do you like to tell stories?

Yes No 13. Do you like to read the newspaper?

Yes No 14. Do you like to read all kinds of books at school?

Yes No 15. Do you like to answer questions about things you have read?

Yes No 16. Do you think it is a waste of time to make rhymes with words?

Yes No 17. Do you like to talk about books you have read?

Yes No 18. Does reading make you feel good?

Yes No 19. Do you feel that reading time is the best part of the school day?

Yes No 20. Do you find it hard to write about what you have read?

Yes No 21. Would you like to have more books to read?

Yes No 22. Do you like to read hard books?

Yes No 23. Do you think that there are many beautiful words in poems?

Yes No 24. Do you like to act out stories that you have read in books?

Yes No 25. Do you like to take reading tests?

APPENDIX B

INSTRUCTIONS FOR WRITTEN LANGUAGE MEASURES

First Grade Written Language Measures
USOE Cooperative Research Project

Directions to the Classroom Teacher

General Information

You are being asked to obtain two writing samples from each pupil in your classroom. We wish to emphasize the necessity of following the directions and procedures exactly.

As you realize, many other teachers throughout the nation will also be asked to obtain writing samples from their pupils. It is necessary, therefore, that these samples be obtained in all classrooms at approximately the same time and by following the same directions.

You are requested to obtain the first writing sample (Restricted Stimulus Measure) on _____ (Project Director Specifies Date).

The second writing sample (Unique Stimulus Measure) should be obtained on _____ (Project Director Specifies Date).

DIRECTIONS --- RESTRICTED STIMULUS MEASURE

Classroom Situation

No attempt should be made to enrich your normal room display through the use of word lists, pictures, dictionaries, etc. The classroom conditions should approximate those normally found in your daily writing activities.

Materials

The writing paper and pencils customarily used in your classroom should be used in obtaining this sample.

Identification

The pupil's name, teacher's name, and the school should be indicated on each pupil's paper. In some cases, you might initial the back of each paper, or a code number may be assigned by your Project Director.

Teacher Directions to the Pupils

You are requested to spend a minimum amount of time motivating the class to write a story. This motivation should consist of:

1. General encouragement to the whole class that you are interested in reading their stories and that they are to use their very best handwriting.
2. Additional encouragement to individual pupils by such directions as:"

> "I'm sure you have an interesting story you would like to write for me today, Billy."
>
> "Sally, I'll bet you have a really good story you would like to write for me."
>
> "I liked that story you wrote for me last week, Mary. I'm sure you could write another one for me. Let's try."

This additional motivation should be of a general type and should be directed toward getting the pupils

to write rather than in providing them with specific ideas.

It is particularly cautioned that no specific titles be presented, nor should pictures or other stimuli be employed.

Other Procedures

No spelling help should be provided during the writing period.

If pupils request spelling assistance, they should be told to try to spell the word and then encouraged to proceed.

If pupils normally use a simplified dictionary or write from displayed flashcards or use a speller, such practices may be allowed.

Under no circumstances, however, should you correct misspellings, give ideas, or assist the pupil beyond the point of general encouragement.

Time Limit

Following the heading of the paper, twenty minutes should be allowed for the pupils to finish their stories. Papers of pupils who finish early should be inconspicuously collected and a coloring exercise or similar silent activity should be provided for the remainder of the twenty minutes.

Written Sample Identification

At the end of twenty minutes, all stories should be collected, packaged, and clearly labeled:

RESTRICTED STIMULUS SAMPLES (Date_____)

You are not to correct these stories; they will be corrected and scored by the Project Director's Staff who will apprise you of the correction procedures should you desire this information.

DIRECTIONS --- UNIQUE STIMULUS MEASURE

This second writing sample should be obtained on the date specified by your Project Director.

The purpose of the measure is to give your pupils an opportunity to write stories using a motivational stimulus with which they are familiar.

Materials

The writing paper and pencils customarily used in your classroom should be used for obtaining this sample.

Identification

The pupil's name, teacher's name, and the school should be indicated on each pupil's paper. In some cases, you might initial the back of each paper, or a code number may be assigned by your Project Director.

Teacher Directions to the Pupils

You may spend as much time as you normally would spend in motivating your pupils to write a story. The amount of time which you spend on this motivational activity should be indicated on the Unique Stimulus Checklist in the space provided.

You may use whatever motivational devices you normally use in encouraging your pupils to write stories.

The research value of these samples depends on your ability to maintain a normal classroom writing situation and then to briefly, but accurately, describe the procedures which you employed.

We are not looking for a "special" kind of writing or a "special" story. We are hopeful, however, of obtaining (according to the ability levels of your pupils) phrases, sentences, or stories which would be typical of those written by your pupils.

Other Procedures

No teacher spelling help should be provided during the writing period. Pupils should be encouraged to try to spell requested words and urged to continue writing.

Spelling aids used by pupils in regular writing periods may be used; use of aids of this kind should be indicated on the Unique Stimulus Checklist.

Time Limit

Following the heading of the paper, twenty minutes should be allowed for the pupils to finish their stories. Papers of pupils who finish early should be inconspicuously collected and a coloring exercise or similar silent activity should be provided for the remainder of the twenty minutes.

Written Sample Identification

At the end of twenty minutes all stories should be collected, packages, and clearly labeled:

UNIQUE STIMULUS SAMPLES (Date_____)

You are not to correct these stories; they will be corrected and scored by the Project Director's Staff who will apprise you of the correction procedures should you desire this information.

Attach the Unique Stimulus Checklist to the writing samples and forward to the Project Director in the manner specified.

APPENDIX C

MEANS AND STANDARD DEVIATIONS OF PRE-TESTS AND POST-TESTS FOR HIGH I.Q., LOW I.Q. AND TOTAL SAMPLE OF THREE ORGANIZATIONAL PATTERNS

MEANS AND STANDARD DEVIATIONS FOR SUBJECTS WITH MENTAL AGE ABOVE 77 ON SUBTESTS OF MURPHY-DURRELL DIAGNOSTIC READING READINESS TEST AND THURSTONE PERCEPTION TEST

	TREATMENT		
	Modified Ind.	Three-To-Five Groups	Whole-Class Lang. Ex.
MURPHY-DURRELL			
Phonemes			
Mean	35.15	32.86	33.16
S.D.	10.36	11.11	10.12
Capital Letter Names			
Mean	21.71	21.49	21.19
S.D.	4.96	5.63	6.25
Lower Case Letter Names			
Mean	17.56	18.66	17.91
S.D.	5.91	5.97	6.77
Capital and Lower Case Letter Names			
Mean	39.38	40.44	38.65
S.D.	10.47	11.00	12.42
Learning Rate			
Mean	12.10	13.75	11.52
S.D.	3.61	3.19	4.21
THURSTONE			
Pattern-Copying			
Mean	21.32	20.44	22.43
S.D.	6.63	5.54	6.45
Identical Forms			
Mean	18.13	17.66	14.40
S.D.	5.12	6.04	4.60

MEANS AND STANDARD DEVIATIONS FOR SUBJECTS WITH MENTAL AGE BELOW 77 ON SUBJECTS OF MURPHY-DURRELL DIAGNOSTIC READING READINESS TEST AND THURSTON PERCEPTION TEST

	TREATMENT		
	Modified Ind.	Three-To-Five Groups	Whole-Class Lang. Ex.
MURPHY-DURRELL			
Phonemes			
Mean	24.73	21.14	17.27
S.D.	13.24	13.19	4.08
Capital Letter Names			
Mean	18.55	17.85	18.65
S.D.	6.02	6.83	5.75
Lower Case Letter Names			
Mean	13.53	14.43	19.06
S.D.	5.60	6.56	8.30
Capital and Lower Case Letter Names			
Mean	31.94	30.78	19.58
S.D.	11.65	12.81	5.63
Learning Rate			
Mean	10.93	11.78	8.42
S.D.	3.40	3.61	5.86
THURSTONE			
Pattern Copying			
Mean	15.23	15.11	35.39
S.D.	6.80	6.94	8.16
Identical Forms			
Mean	15.75	12.86	34.69
S.D.	5.30	6.45	10.68

MEANS AND STANDARD DEVIATIONS FOR SUBJECTS IN THE THREE TREATMENT GROUPS ON SUBTESTS OF METROPOLITAN READINESS TESTS AND PINTNER-CUNNINGHAM PRIMARY TEST, FORM A

	TREATMENT		
	Modified Ind.	Three-To-Five Groups	Whole-Class Lang. Ex.
METROPOLITAN			
Word Meaning			
Mean	9.79	8.39	9.81
S.D.	2.73	2.64	7.26
Listening			
Mean	9.45	8.39	9.27
S.D.	2.51	2.59	2.58
Matching			
Mean	9.15	6.34	7.34
S.D.	3.02	3.97	3.91
Alphabet			
Mean	9.37	8.45	9.19
S.D.	4.19	6.45	4.58
Numbers			
Mean	14.03	11.17	12.50
S.D.	4.04	4.52	4.28
Copying			
Mean	7.48	6.78	7.29
S.D.	2.86	3.59	3.22
TOTAL			
Mean	59.26	51.84	55.49
S.D.	13.59	48.42	15.20
PINTER-CUNNINGHAM			
Mental Age			
Mean	77.07	73.64	78.86
S.D.	9.79	10.48	10.32

MEANS AND STANDARD DEVIATIONS FOR SUBJECTS WITH MENTAL AGE ABOVE 77 ON SUBTESTS OF STANFORD ACHIEVEMENT TESTS

	TREATMENT		
	Modified Ind.	Three-To-Five Groups	Whole-Class Lang. Ex.
Word Meaning			
Mean	24.28	23.77	23.90
S.D.	6.14	5.15	5.59
Paragraph Meaning			
Mean	25.96	25.47	24.84
S.D.	8.80	7.28	7.76
Vocabulary			
Mean	23.23	24.90	24.28
S.D.	6.27	4.87	6.00
Spelling			
Mean	13.51	13.34	12.59
S.D.	5.40	4.78	4.65
Word Study			
Mean	41.87	41.57	41.28
S.D.	8.14	7.21	7.45
Arithmetic			
Mean	45.78	42.34	44.43
S.D.	9.82	9.27	10.50

MEANS AND STANDARD DEVIATIONS FOR ALL SUBJECTS WITHIN THE THREE TREATMENT GROUPS ON SUBTESTS OF STANFORD ACHIEVEMENT TESTS

	TREATMENT		
	Modified Ind.	Three-To-Five Groups	Whole-Class Lang. Ex.
Word Meaning			
Mean	21.35	20.05	21.73
S.D.	6.89	6.86	6.36
Paragraph Meaning			
Mean	22.22	21.36	22.39
S.D.	9.55	8.34	8.49
Vocabulary			
Mean	21.52	20.93	21.96
S.D.	6.33	6.01	6.49
Spelling			
Mean	11.56	10.86	11.49
S.D.	7.91	6.26	7.18
Word Study			
Mean	38.26	36.11	38.74
S.D.	9.02	9.40	8.35
Arithmetic			
Mean	39.85	34.03	40.00
S.D.	12.41	12.91	11.90